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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/135,154	08/17/1998	T. ALLAN HAMILTON	CLB5-B73	8963

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EXAMINER

ZIMMERMAN, BRIAN A

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/135,154

**Applicant(s)**

HAMILTON, T. ALLAN

**Examiner**

Brian A Zimmerman

**Art Unit**

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 50-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 50-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **EXAMINER'S RESPONSE**

#### **Status of Application**

In response to the applicant's amendment received on 5/26/04. The examiner has considered the new presentation of claims and applicant arguments in view of the disclosure and the present state of the prior art. And it is the examiner's position that claims 50-57 are unpatentable for the reasons set forth in this office action:

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 53-55 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claim 53, support could not be found in the original specification for a limit of having only one IR receiver. Claims 54 and 55 depend from claim 53 and include the same unsupported limitation.

**Claim Rejections - 35 USC § 103**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 50-57 are rejected under 35 U.S.C. 103(a) as obvious over Kohler (U.S. 5,115,236) and the IRDA specification as discussed by the applicant on page 3 of the specification and the EP publication Selin (EP 0772307) and Kulha (5973611).

Kohler teaches a device (Fig. 2) for reducing power consumption in infrared-enabled appliances having power supply means and transceiver system means forming a circuit including switch means (Col. 1, lines 7-28 and Col. 2, lines 30-54), comprising: (wake-up) signal receiver (RC receiver in Fig. 2) and power actuator module (control voltage output 41 in Fig. 2), said module configured to recognize incident Ir discovery signals and responsively activate said switch means (Col. 3, lines 53-68 through Col. 5, lines 1-22). Kohler teaches an infrared receiver (Fig. 2) and discovery signal detection circuitry configured to recognize the power level of the infrared "discovery signals" incident to said receiver and emit a power-up signal to said switch means (Fig. 2; Col. 4, lines 28-56). Kohler teaches that the power-up (message) signal can be instigated by user input (keyboard 8 in Fig. 3) via the transmitter portion of the transceiver system (Col. 5, lines 30-48). It is noted the Kohler device requires interpretation to determine if a wake up signal is being received. Therefore the received signal is interpreted in order to determine if a wake up signal has been received. The applicant admits that the IRDA standard discovery signal is used as a wake up signal. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to have used an IRDA discovery signal to control the wake up elements of the Kohler communication system.

In an analogous art, Selin shows a communication device that uses a sleep mode to reduce power consumption in the devices. Selin uses a specially coded signal or sequence to wake up a receiving communication unit. See col. 4 lines 45-55 and col. 9 lines 32+. Selin teaches that most of the activities of the device are switched off in order to conserve power. In the above system, the receiver (and a portion of the processor that recognizes the wake up signal) must remain on to enable waking up of the device. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have switched off the claimed elements as unessential elements while providing power to the receiver and associated wake up discovery processor as suggested by Selin in the Kohler system because such would provide improved power conservation.

In an analogous art, Kulha shows a signal processor that is used to received a signal and generates a wake up or power up signal when the appropriate over the air signal is received. By providing a sleep mode the receiver advantageously saves power. By providing the processor with a portion that remains awake to receive wireless signals and wake up the rest of the processor the device can be provided in a single, simple circuit thus reducing space required on the circuit board. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the sleep mode detecting section of a processor as shown by Kulha to

reduce power consumption and reduce the space taken up by the circuitry of the IR communication device discussed above.

3. Claims 50-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nykanen (5706110) and and Kulha (5973611).

Nakanen shows a bi-directional IR communication device that includes bi-directional interface with the user, see figure 1 and description of IRDA. Nakanen inherently processes the IR signals received, and inherently includes a controller to control the operation of the transmitter, receiver and power supply. Nakanen shows a power management device, which in a standby mode provides operating power to only a portion of the circuit needed to receive and decode a wake up signal, while switching off the additional circuits. See col. 4 lines 1-15.

Nakanen does not expressly show a battery as the power supply, but one of ordinary skill in the art at the time of the invention would have found it obvious to use a battery as the power supply in the Nakanen device in order to make the device portable or mobile.

In an analogous art, Kulha shows a signal processor that is used to receive a signal and generates a wake up or power up signal when the appropriate over the air signal is received. By providing a sleep mode the receiver advantageously saves power. By providing the processor with a portion that remains awake to receive wireless signals and wake up the rest of the processor the device can be provided in a single, simple circuit thus reducing space required on the circuit board. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to have used the sleep mode detecting section of a processor as shown by Kulha to reduce power consumption and reduce the space taken up by the circuitry of the IR communication device discussed above.

### ***Response to Arguments***

Applicant's arguments filed 5/26/04 have been fully considered but they are not persuasive.

The applicant argues that Kohler does not relate to IRDA protocol, and the applicant adds that Kohler does not show that the unique pulses does nothing more than wake up the device. Kohler is analogous to IRDA protocol since both use a wake up signal; Kohler's is called a wake up pulse and the signal in the IRDA protocol is called a discovery signal. The rejection set forth by the examiner describes that the applicant admits that the IRDA standard discovery signal is used as a wake up signal and since Kohler detects a wake up signal to perform the claimed steps. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used an IRDA discovery signal to control the wake up elements of the Kohler communication system.

The applicant argues that Selin is not related to IRDA protocol, and the applicant adds that Selin does not teach a sleep mode in which a discovery signal can be

detected. Selin is analogous to the problem of power saving and is therefore analogous to the claimed invention. Selin is not cited for teaching IRDA protocol. Selin uses a specially coded signal or sequence to wake up a receiving communication unit. Selin teaches that most of the activities of the device are switched off in order to conserve power. Selin must inherently maintain a certain amount of receiving ability even during the sleep mode since a determination must be made to detect if the special sequence is received.

The applicant argues that Kuhla has nothing to do with IRDA protocol, and the applicant adds that Kuhla cannot be used since none of the references note a problem with IRDA transceivers. Kuhla is analogous to the problem of power saving in that a wake up function is performed. Kuhla is not cited for teaching the specifics of IRDA protocol. Kuhla teaches that by providing a sleep mode the receiver advantageously saves power. By providing the processor with a portion that remains awake to receive wireless signals and wake up the rest of the processor the device can be provided in a single, simple circuit thus reducing space required on the circuit board. This is clear suggestion for any receiver that includes a limited power supply and makes it analogous to the references and the claimed invention.

The applicant argues that the IRDA specification would lead away from the claimed invention because it does not teach a power saving operation. The examiner does not cite the IRDA specification for teaching power saving. Additional references



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are cited to teach that wake up signals similar to the IRDA discovery signal can be used to switch between low and high power modes in limited power transceivers.

Furthermore, it can be argued that the IRDA specification does teach low power mode (read receiving only) and high power mode (receiving and transmitting) where the transceiver is switched between the two modes in response to the reception of the discovery signal.

The applicant argues that Nykanen does not describe a transceiver having two different power modes. The applicant also requests passages in Nykanen that show two power consumption modes. The paragraph bridging columns 3 and 4 states:

...The object of the invention is to control a connection between stations in such a way that when there is an idle period in the services of the application layer, the link on the transmission medium is powered down. After powering down, **the stations or at least the parts of the station connected with the physical transmission medium can go over to a low-power sleep mode which is available to them. The stations are woken up by means of an indication of activity of the physical layer or by an excitation coming from a service that has established a connection of the application layer.**

Therefore, it can be clearly seen that the transceivers in Nykanen include a low power sleep mode and inherently include a higher power non-sleep mode.

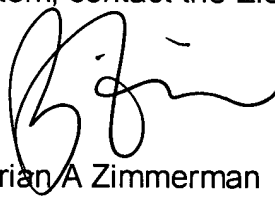
In considering the declaration of Alan Grace. Item 9 is taken to be the most relevant to the applicant's argument of secondary consideration to nonobviousness being commercial success. To be given substantial weight in the determination of

obviousness or nonobviousness, evidence of secondary considerations must be relevant to the subject matter as claimed, and therefore the examiner must determine whether there is a nexus between the merits of the claimed invention and the evidence of secondary considerations. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 305 n.42, 227 USPQ 657, 673-674n. 42 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986). The term "nexus" designates a factually and legally sufficient connection between the objective evidence of nonobviousness and the claimed invention so that the evidence is of probative value in the determination of nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir.), cert. denied, 488 U.S. 956 (1988). The applicant has not given any facts other than an alledgation of commercial success. Such facts can include, but are not limited to; percent market share, cost comparison (for example is the power saving transceiver pennies more expensive or dollars more expensive than the non-power saving transceiver). See MPEP 716.03. The term "nexus" designates a factually and legally sufficient connection between the evidence of commercial success and the claimed invention so that the evidence is of probative value in the determination of nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 7 USPQ2d 1222 (Fed. Cir. 1988). Item 9 of the declaration does provide some underlying reasoning that when compared to the facts presented by the examiner in the rejection are not persuasive of nonobviousness due to the commonplace concepts and desirability's of having power sleep modes in power limited transceivers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian A Zimmerman whose telephone number is 703-305-4796. The examiner can normally be reached on Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Horabik can be reached on 703-305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian A Zimmerman  
Primary Examiner  
Art Unit 2635

BAZ